ELSEVIER

Journal of Alloys and Compounds 248 (1997) 259

Journal of ALLOYS AND COMPOUNDS

Author Index of Volume 248

Akiba, E., 164
Alexander, M.G., 24
Anderson, J., 59
Andreev, Yu.G., 86
Avillez, R.R., 246
Azoulay, A., 209

Baggio-Saitovitch, E., 246
Bharadwaj, S.R., 80
Bortz, M., L1
Bucher, E., 70
Bulanova, M.V., 233
Buschow, K.H.J., 121

Cavin, O.B., 139
Chattopadhyay, K., 192
Chen, J., 146
Cherkashenko, V.M., 86
Cholewa, K., 42
Chykhrij, S.I., 224
Cisowski, J., 98
Cockayne, B., 125
Cui, N., 159

de Boer, F.R., 121
de Groot, C.H., 121
Dharwadkar, S.R., 80
Ding, X.-z., 143
DiSalvo, F.J., 24
Dou, S.X., 146, 159
Doyle, S., 246

Ekambaram, S., 7
Eriksson, L., 33
Ezhov, A.V., 86

Faber, K.T., 139
Fauth, F., 13
Fromm, E., 209
Fukuda, T., 18
Fukuto, M., 59

Gao, J.-r., 176
Gingl, F., 13
Gordon, R.A., 24
Guo, Q., 185

Harris, I.R., 125
Hayakawa, H., 164
Hayashi, S., 66
Heimann, J., 98
Hewat, A., L1, 13
Hohl, H., 70
Höhn, P., 1
Holm, W., 33
Hornbostel, M.D., 59
Huang, B., 13
Huang, H., 59
Hubbard, C.R., 139
Huot, J., 164
Hu, Z., 121

Inaba, H., 168
Isobe, T., 52

Jacobs, H., 1
Jakob Kleppa, O., 185
Johnson, D.C., 59

Kawazoe, Y., 90
Kerkar, A.S., 80
Kevan, S.D., 59
Kim, Y.H., 251
Kisi, E.H., 201
Knepfler, C.A., 139
Kniep, R., 1
Kojima, Y., 52
Kravtzov, V., 98
Kudou, K., 18
Kurmaev, E.Z., 86
Kuz'ma, Yu.B., 224

Łączka, M., 42
Łączka-Osyczka, A., 42
Lane, P.A., 125
Latroche, M., 215
Liang, J., 106
Liu, H.K., 146, 159
Liu, X.-h., 143
Li, J., 180
Loukashouk, G.V., 224
Luan, B., 159
Lundström, T., 86

Luo, H., 121

Maeta, H., 77
Majumdar, B., 192
Malaman, B., 101, 112
Manivel Raja, M., 192
Matsumoto, T., 18
Mei, W., 132, 151
Mintz, M.H., 209
Mishra, R., 80
Muo, F., 180

Narayanasamy, A., 192
Nateprov, A., 98
Norlidah, M.N., 112
Numakura, H., 251

Okada, S., 18
Okane, T., 132, 151
Oku, M., 18
Oliver, P.E., 125
Olofsson, C., 33
Olson, G.B., 139
Ono, K., 251
Oryshchyn, S.V., 224

Packen, N., 139
Palstra, T.T.M., 70
Patil, K.C., 7
Percheron-Guégan, A., 215
Pöttgen, R., 24

Qin, W., 206
Qin, Y., 220

Ramirez, A.P., 70
Rao, G., 106
Ressouche, E., 101, 112
Rizzo Assunção, F.C., 246

Sakurai, M., 52
Sasaki, T., 18
Senna, M., 52
Shamin, S.N., 86
Shamir, N., 209
Shishido, T., 18
Sidorko, V.R., 233

Sluiter, M., 90
Smith, N.A., 125
Song, X.-p., 176
Sumiyama, K., 52
Sun, D., 215
Sun, Y., 106
Suzuki, K., 52
Suzuki, R.O., 251
Svensson, G., 33
Szokefalvi-Nagy, A., 209

Tai, L., 180
Takahashi, M., 90
Tang, W., 106
Tilsley, M.E.G., 125

Umeda, T., 132, 151

Venturini, G., 101, 112

Wachsmann, Ch., 1
Wada, H., 251
Wang, X.-t., 176
Warren, C.J., 24
Weertman, J., 139
Witusiewicz, V.T., 233
Wright, P.J., 125
Wroblewski, T., 246
Wu, J., 180

Xiaolong Chen, .C., 106
Xia, S.K., 246
Xu, R., 180

Yamakawa, K., 77
Yang, J., 106
Yelon, W.B., 121
Ye, J., 18
Yukawa, H., 168
Yvon, K., L1, 13

Zhang, H., 201
Zhang, W., 180
Zhao, H.J., 159
Zhou, H., 206
Zhou, S., 151
Zhuang, Y., 206

Elsevier Science S.A.

ELSEVIER

Journal of Alloys and Compounds 248 (1997) 261–265

Journal of ALLOYS AND COMPOUNDS

Subject Index of Volume 248

Amorphization
new ball milling induced solid solution and amorphous phases in the Zn–V system 201

Ball-milled amorphous Fe_2Sc alloys
structural evolution of ball-milled amorphous Fe_2Sc powders during heat treatment 246
Ball-milling
properties of $Zr_{0.5}Ti_{0.5}(V_{0.25}Mn_{0.15}Ni_{0.6})_2$ alloy ball-milled with nickel powder 146
new ball milling induced solid solution and amorphous phases in the Zn–V system 201
Bioactive glass–ceramic materials
gel-derived powders of $CaO–P_2O_5–SiO_2$ system as a starting material to production of bioactive ceramics 42
Bismuth neodynium oxides
subsolidus phase relations of $Bi_2O_3–Nd_2O_3–CuO$ 106
Boron nitride
x-Ray Emission Spectra and Structural Models of BCN Materials 86

$CaTeO_3$
determination of the Gibb's energy of formation of $CaTeO_3$ and $CaTe_2O_5$ by the transpiration technique 80
$CaTe_2O_5$
determination of the Gibb's energy of formation of $CaTeO_3$ and $CaTe_2O_5$ by the transpiration technique 80
Cerium
effects of lanthanum or cerium on the equilibrium of $ZrNi_{1.2}Mn_{0.6}V_{0.2}Cr_{0.1}$ and its related hydrogenation properties 215
Cerium intermetallic
substitution in Ce_2TSi_3 intermetallic compositions with T = (Cr, Mn, Fe, Co, or Ni)$_x$(Pd or Au)$_{1-x}$ 24
Charge transfer
correlation between the parameters obtained from the DV-Xα molecular orbital calculation and the partial molar enthalpies of formation for liquid Ni-, Fe-, Cr- and Ti-based transition metal alloys 168
Chemisorption kinetics
hydrogen interactions with polycrystalline and with deposited titanium surfaces 209
Complex transition metal hydride
new tetragonal metal hydrides $BaMg_2TH_8$ (T = Ru, Os) containing octahedral $[TH_6]^{4-}$ complex anions and hydride anions 13
Condensed Nb_6O_{12} clusters
studies on $Ba_2Nb_{5-x}Ti_xO_9$ ($0 \le x \le 1.75$) 33
Copper
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192
Crystallization
structural evolution of ball-milled amorphous Fe_2Sc powders during heat treatment 246
Crystal structure
$(OLi_2Ca_4)_3[MN_4]_4$ (M = Mo, W): nitridometalate oxides with close structural relationships to the Th_3P_4 type structure 1
crystal growth and characterizations of $ErRh_3B_2$ 18
crystal structure and properties of $CuMn_3As_2$ 98
magnetic properties of $Tb_2Mn_{17}C_x$ compounds studied by magnetic measurements and neutron diffraction 121
phase equilibria and crystal structure of compounds in the Ce–Cu–P system 224
$CuMn_3As_2$
crystal structure and properties of $CuMn_3As_2$ 98

Differential thermal analysis
subsolidus phase relations of $Bi_2O_3–Nd_2O_3–CuO$ 106
Directional solidification
directional solidification of Tb–Dy–Fe magnetostrictive alloy 151

Electrical characteristics
studies on $Ba_2Nb_{5-x}Ti_xO_9$ ($0 \le x \le 1.75$) 33
Electrical resistivity
hydrogen migration in Lu at low temperatures 77
Electrochemical impedance spectra
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
Electron diffraction
transmission electron microscopy investigation of metastable phases in PdAgSi alloy films 220
Electronic total energy calculations
theoretical study of phase stability in $LaNi_5–LaCo_5$ alloys 90
Empirical assessment
assessment of thermodynamic functions of formation for rare earth silicides, germanides, stannides and plumbides 233
Enthalpy of formation
assessment of thermodynamic functions of formation for rare earth silicides, germanides, stannides and plumbides 233
Entropy of formation
assessment of thermodynamic functions of formation for rare earth silicides, germanides, stannides and plumbides 233
$ErRh_3B_2$
crystal growth and characterizations of $ErRh_3B_2$ 18
EXAFS
an XAFS study on reconstruction of short-range order in mechanically alloyed Al–Ti and Al–Ti–O complexes 52
External gettering
removal of oxygen and nitrogen from niobium by exernal gettering 251

Fe–Cu system
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192
Fe formation
structural evolution of ball-milled amorphous Fe_2Sc powders during heat treatment 246

Elsevier Science S.A.

Ferromagnetism
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
Fe substitution
the x–T magnetic phase diagram of the $LaMn_{2-x}Fe_xGe_2$ ($0 \le x \le 1$) system by neutron diffraction study 112
First-order phase transition
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
Fluorescence
synthesis and properties of Eu^{2+} activated blue phosphors 7
Formation enthalpies
standard enthalpies of formation of some thulium alloys, Tm + Me (Me = Ni, Rh, Pd, Pt), by high temperature direct synthesis calorimetry 185

Gibb's energy
determination of the Gibb's energy of formation of $CaTeO_3$ and $CaTe_2O_5$ by the transpiration technique 80
Grain growth
grain growth enhanced by anatase-to-rutile transformation in gel-derived nanocrystalline titania powders 143
Granular system
structural evolution of ball-milled amorphous Fe_2Sc powders during heat treatment 246
Graphite
x-Ray Emission Spectra and Structural Models of BCN Materials 86

^1H NMR
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66
Hard materials
x-Ray Emission Spectra and Structural Models of BCN Materials 86
HDDR
effects of Co and Zr additions on microstructure and anisotropy of HDDR-treated NdFeB alloy powders 176
High temperature direct synthesis calorimetry
standard enthalpies of formation of some thulium alloys, Tm + Me (Me = Ni, Rh, Pd, Pt), by high temperature direct synthesis calorimetry 185
High-temperature X-ray diffraction
high temperature stability and thermal expansion behavior of molybdenum–chromium M_2C carbides 139
Ho–Fe–Nb
the 500 ℃ isothermal section of the phase diagram of the ternary Ho–Fe–Nb system 206
Hydride complex
synthesis and structure determination of complex zinc hydrides. Part 3. Dirubidium- and di-caesiumtetrahydriodozincate(II), Rb_2ZnH_4 and Cs_2ZnH_4 L1
Hydride electrode
properties of $Zr_{0.5}Ti_{0.5}(V_{0.25}Mn_{0.15}Ni_{0.6})_2$ alloy ball-milled with nickel powder 146
Hydrogen
preparation of the hydrides Mg_2FeH_6 and Mg_2CoH_5 by mechanical alloying followed by sintering 164
Hydrogen in metals
hydrogen interactions with polycrystalline and with deposited titanium surfaces 209
Hydrogen migration
hydrogen migration in Lu at low temperatures 77
Hydrogen storage material
the study on the hydrogen storage properties of $MmNi_{3.55}Co_{0.75}Mn_{0.7-x}Al_x$ compounds 180
Hydrogenation
effects of lanthanum or cerium on the equilibrium of $ZrNi_{1.2}Mn_{0.6}V_{0.2}Cr_{0.1}$ and its related hydrogenation properties 215
Hydrogen in metals
effects of lanthanum or cerium on the equilibrium of $ZrNi_{1.2}Mn_{0.6}V_{0.2}Cr_{0.1}$ and its related hydrogenation properties 215
Hydrogen storage
properties of $Zr_{0.5}Ti_{0.5}(V_{0.25}Mn_{0.15}Ni_{0.6})_2$ alloy ball-milled with nickel powder 146
Hydrogen storage alloy
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
Hydroxyapatite
gel-derived powders of CaO–P_2O_5–SiO_2 system as a starting material to production of bioactive ceramics 42

Inhomogeneity
phase diagram and inhomogeneity of (TbDy)–Fe(T) (T = Mn, Co, Al, Ti) systems 132
directional solidification of Tb–Dy–Fe magnetostrictive alloy 151
Intergrowth structure
studies on $Ba_2Nb_{5-x}Ti_xO_9$ ($0 \le x \le 1.75$) 33
Intermetallic Tm compounds
standard enthalpies of formation of some thulium alloys, Tm + Me (Me = Ni, Rh, Pd, Pt), by high temperature direct synthesis calorimetry 185
Interstitial alloys
magnetic properties of $Tb_2Mn_{17}C_x$ compounds studied by magnetic measurements and neutron diffraction 121
Ionicity
correlation between the parameters obtained from the DV-Xα molecular orbital calculation and the partial molar enthalpies of formation for liquid Ni-, Fe-, Cr- and Ti-based transition metal alloys 168
Iron
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192

Kinetics
the effect of layer thickness and composition on the kinetics of solid state reactions in the niobium–selenium system studied using superlattice reactants 59
Knight shift
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66

La–Co–Ni alloys
theoretical study of phase stability in $LaNi_5$–$LaCo_5$ alloys 90
$LaNi_5$
theoretical study of phase stability in $LaNi_5$–$LaCo_5$ alloys 90
$LaNi_5$-type compound
the study on the hydrogen storage properties of $MmNi_{3.55}Co_{0.75}Mn_{0.7-x}Al_x$ compounds 180

Lanthanoid–copper phosphides
phase equilibria and crystal structure of compounds in the Ce–Cu–P system 224
Lanthanum
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
effects of lanthanum or cerium on the equilibrium of $ZrNi_{1.2}Mn_{0.6}V_{0.2}Cr_{0.1}$ and its related hydrogenation properties 215
Low temperature
hydrogen migration in Lu at low temperatures 77

Magic angle spinning
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66
Magnesium hydride
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66
Magnesium nickel hydride
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66
Magnetic anisotropy
effects of Co and Zr additions on microstructure and anisotropy of HDDR-treated NdFeB alloy powders 176
Magnetic properties
magnetic properties of $Tb_2Mn_{17}C_x$ compounds studied by magnetic measurements and neutron diffraction 121
Magnetic structure
the x–T magnetic phase diagram of the $LaMn_{2-x}Fe_xGe_2$ ($0 \leq x \leq 1$) system by neutron diffraction study 112
Magnetic susceptibility
substitution in Ce_2TSi_3 intermetallic compositions with T = (Cr, Mn, Fe, Co, or Ni)$_x$(Pd or Au)$_{1-x}$ 24
thermoelectric and magnetic properties of $Cr_{1-x}V_xSi_2$ solid solutions 70
crystal structure and properties of $CuMn_3As_2$ 98
Magnetisation
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192
Magnetoresistance
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
Magnetostriction
phase diagram and inhomogeneity of (TbDy)–Fe(T) (T = Mn, Co, Al, Ti) systems 132
directional solidification of Tb–Dy–Fe magnetostrictive alloy 151
Manganese moment
the x–T magnetic phase diagram of the $LaMn_{2-x}Fe_xGe_2$ ($0 \leq x \leq 1$) system by neutron diffraction study 112
M_2C carbides
high temperature stability and thermal expansion behavior of molybdenum–chromium M_2C carbides 139
Mechanical alloying
an XAFS study on reconstruction of short-range order in mechanically alloyed Al–Ti and Al–Ti–O complexes 52
preparation of the hydrides Mg_2FeH_6 and Mg_2CoH_5 by mechanical alloying followed by sintering 164
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192
new ball milling induced solid solution and amorphous phases in the Zn–V system 201
Mechanochemical complexes
an XAFS study on reconstruction of short-range order in mechanically alloyed Al–Ti and Al–Ti–O complexes 52
Metal hydride
new tetragonal metal hydrides $BaMg_2TH_4$ (T = Ru, Os) containing octahedral $[TH_6]^{4-}$ complex anions and hydride anions 13
accurate determination of ^1H Knight shifts in Mg_2NiH_4 and MgH_2 by means of high-speed magic angle spinning 66
Metal hydrides
theoretical study of phase stability in $LaNi_5$–$LaCo_5$ alloys 90
preparation of the hydrides Mg_2FeH_6 and Mg_2CoH_5 by mechanical alloying followed by sintering 164
Metastable phase
transmission electron microscopy investigation of metastable phases in PdAgSi alloy films 220
Mg_2CoH_5
preparation of the hydrides Mg_2FeH_6 and Mg_2CoH_5 by mechanical alloying followed by sintering 164
Mg_2FeH_6
preparation of the hydrides Mg_2FeH_6 and Mg_2CoH_5 by mechanical alloying followed by sintering 164
Microstructure
effects of Co and Zr additions on microstructure and anisotropy of HDDR-treated NdFeB alloy powders 176
Micro-Vickers hardness
crystal growth and characterizations of $ErRh_3B_2$ 18
MnAs
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
MOCVD
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
Molecular orbital calculation
correlation between the parameters obtained from the DV-Xα molecular orbital calculation and the partial molar enthalpies of formation for liquid Ni-, Fe-, Cr- and Ti-based transition metal alloys 168

Nanocrystalline materials
grain growth enhanced by anatase-to-rutile transformation in gel-derived nanocrystalline titania powders 143
NdFeB
effects of Co and Zr additions on microstructure and anisotropy of HDDR-treated NdFeB alloy powders 176
Niobium–selenium system
the effect of layer thickness and composition on the kinetics of solid state reactions in the niobium–selenium system studied using superlattice reactants 59
Neutron diffraction
the x–T magnetic phase diagram of the $LaMn_{2-x}Fe_xGe_2$ ($0 \leq x \leq 1$) system by neutron diffraction study 112
Neutron powder diffraction
synthesis and structure determination of complex zinc hydrides. Part 3. Dirubidium- and dicaesiumtetrahydriodozincate(II), Rb_2ZnH_4 and Cs_2ZnH_4 L1
Nickel
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
Ni–MH battery
the study on the hydrogen storage properties of $MmNi_{3.55}Co_{0.75}Mn_{0.7-x}Al_x$ compounds 180

Nitridometalates
$(OLi_2Ca_4)_3[MN_4]_4$ (M = Mo, W): nitridometalate oxides with close structural relationships to the Th_3P_4 type structure 1
Non-stoichiometry
high temperature stability and thermal expansion behavior of molybdenum–chromium M_2C carbides 139

Order–disorder
hydrogen migration in Lu at low temperatures 77
Osmium hydride complex
new tetragonal metal hydrides $BaMg_2TH_8$ (T = Ru, Os) containing octahedral $[TH_6]^{4-}$ complex anions and hydride anions 13
Oxygen diffusion
removal of oxygen and nitrogen from niobium by exernal gettering 251

Partial molar enthalpy of formation
correlation between the parameters obtained from the DV-Xα molecular orbital calculation and the partial molar enthalpies of formation for liquid Ni-, Fe-, Cr- and Ti-based transition metal alloys 168
PdAgSi alloy
transmission electron microscopy investigation of metastable phases in PdAgSi alloy films 220
Phase diagram
phase diagram and inhomogeneity of (TbDy)–Fe(T) (T = Mn, Co, Al, Ti) systems 132
phase equilibria and crystal structure of compounds in the Ce–Cu–P system 224
theoretical study of phase stability in $LaNi_5$–$LaCo_5$ alloys 90
Phase diagrams
the 500 °C isothermal section of the phase diagram of the ternary Ho–Fe–Nb system 206
Phase selection
phase diagram and inhomogeneity of (TbDy)–Fe(T) (T = Mn, Co, Al, Ti) systems 132
Phase transformation
grain growth enhanced by anatase-to-rutile transformation in gel-derived nanocrystalline titania powders 143
Phosphors
synthesis and properties of Eu^{2+} activated blue phosphors 7
Polycrystalline
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
Preferred growth direction
directional solidification of Tb–Dy–Fe magnetostrictive alloy 151
Preparation
phase equilibria and crystal structure of compounds in the Ce–Cu–P system 224
Profile refinement
studies on $Ba_2Nb_{5-x}Ti_xO_9$ ($0 \le x \le 1.75$) 33
Purification of niobium
removal of oxygen and nitrogen from niobium by exernal gettering 251
Purity estimation
removal of oxygen and nitrogen from niobium by exernal gettering 251

Rare earth compounds
phase diagram and inhomogeneity of (TbDy)–Fe(T) (T = Mn, Co, Al, Ti) systems 132
directional solidification of Tb–Dy–Fe magnetostrictive alloy 151
Rare-earth intermetallics
the study on the hydrogen storage properties of $MmNi_{3.55}Co_{0.75}Mn_{0.7-x}Al_x$ compounds 180
Rare earth manganese germanides
the x–T magnetic phase diagram of the $LaMn_{2-x}Fe_xGe_2$ ($0 \le x \le 1$) system by neutron diffraction study 112
Rare earth-p element compound
assessment of thermodynamic functions of formation for rare earth silicides, germanides, stannides and plumbides 233
Reduced oxoniobates
studies on $Ba_2Nb_{5-x}Ti_xO_9$ ($0 \le x \le 1.75$) 33
Refractory disilicides
thermoelectric and magnetic properties of $Cr_{1-x}V_xSi_2$ solid solutions 70
Resistivity
thermoelectric and magnetic properties of $Cr_{1-x}V_xSi_2$ solid solutions 70
Ruthenium hydride complex
new tetragonal metal hydrides $BaMg_2TH_8$ (T = Ru, Os) containing octahedral $[TH_6]^{4-}$ complex anions and hydride anions 13

Single crystalline
comparative study of electrochemical behaviour of single-crystalline and polycrystalline $LaNi_5$ alloy electrodes 159
Sintering
gel-derived powders of CaO–P_2O_5–SiO_2 system as a starting material to production of bioactive ceramics 42
Sol–gel method
gel-derived powders of CaO–P_2O_5–SiO_2 system as a starting material to production of bioactive ceramics 42
Solid solutions
subsolidus phase relations of Bi_2O_3–Nd_2O_3–CuO 106
Solid state reactions
the effect of layer thickness and composition on the kinetics of solid state reactions in the niobium–selenium system studied using superlattice reactants 59
Specific resistivity
crystal structure and properties of $CuMn_3As_2$ 98
Structural models
x-Ray Emission Spectra and Structural Models of BCN Materials 86
Structural relations
$(OLi_2Ca_4)_3[MN_4]_4$ (M = Mo, W): nitridometalate oxides with close structural relationships to the Th_3P_4 type structure 1
Structure
structural and magnetic investigations on the metastable phases of the mechanically alloyed Fe–Cu system 192
Superlattice reactants
the effect of layer thickness and composition on the kinetics of solid state reactions in the niobium–selenium system studied using superlattice reactants 59
Synthesis
$(OLi_2Ca_4)_3[MN_4]_4$ (M = Mo, W): nitridometalate oxides with close structural relationships to the Th_3P_4 type structure 1

Ternary carbides
magnetic properties of $Tb_2Mn_{17}C_x$ compounds studied by magnetic measurements and neutron diffraction 121

Terbium manganese compounds
magnetic properties of $Tb_2Mn_{17}C_2$ compounds studied by magnetic measurements and neutron diffraction 121
Ternary phase diagram
subsolidus phase relations of Bi_2O_3–Nd_2O_3–CuO 106
Ternary systems
the 500 °C isothermal section of the phase diagram of the ternary Ho–Fe–Nb system 206
TG-DTA
crystal growth and characterizations of $ErRh_3B_2$ 18
Thermal expansion
high temperature stability and thermal expansion behavior of molybdenum–chromium M_2C carbides 139
Thermodynamics
$(OLi_2Ca_4)_3[MN_4]_4$ (M = Mo, W): nitridometalate oxides with close structural relationships to the Th_3P_4 type structure 1
Thermodynamics of impurities
removal of oxygen and nitrogen from niobium by exernal gettering 251
Thermoelectric power
crystal structure and properties of $CuMn_3As_2$ 98
Thermopower
thermoelectric and magnetic properties of $Cr_{1-x}V_xSi_2$ solid solutions 70
Thin film
magnetic and electrical characteristics of MnAs films grown by metalorganic chemical vapour deposition 125
transmission electron microscopy investigation of metastable phases in PdAgSi alloy films 220
Titania
grain growth enhanced by anatase-to-rutile transformation in gel-derived nanocrystalline titania powders 143
Titanium hydrides
hydrogen interactions with polycrystalline and with deposited titanium surfaces 209
Transpiration
determination of the Gibb's energy of formation of $CaTeO_3$ and $CaTe_2O_5$ by the transpiration technique 80
Transition metal alloy
correlation between the parameters obtained from the DV-Xα molecular orbital calculation and the partial molar enthalpies of formation for liquid Ni-, Fe-, Cr- and Ti-based transition metal alloys 168

Valence fluctuation
substitution in Ce_2TSi_3 intermetallic compositions with T = (Cr, Mn, Fe, Co, or Ni)$_x$(Pd or Au)$_{1-x}$ 24
Vegard's law
thermoelectric and magnetic properties of $Cr_{1-x}V_xSi_2$ solid solutions 70

Wollastonite
gel-derived powders of CaO–P_2O_5–SiO_2 system as a starting material to production of bioactive ceramics 42

XAFS
an XAFS study on reconstruction of short-range order in mechanically alloyed Al–Ti and Al–Ti–O complexes 52
XANES
an XAFS study on reconstruction of short-range order in mechanically alloyed Al–Ti and Al–Ti–O complexes 52
XPS
crystal growth and characterizations of $ErRh_3B_2$ 18
X-ray diffraction
synthesis and properties of Eu^{2+} activated blue phosphors 7
subsolidus phase relations of Bi_2O_3–Nd_2O_3–CuO 106
new ball milling induced solid solution and amorphous phases in the Zn–V system 201
X-ray emission spectra
x-ray Emission Spectra and Structural Models of BCN Materials 86

Zinc hydrides
synthesis and structure determination of complex zinc hydrides. Part 3. Dirubidium- and dicaesiumtetrahydriodozincate(II), Rb_2ZnH_4 and Cs_2ZnH_4 L1
Zn–V alloys
new ball milling induced solid solution and amorphous phases in the Zn–V system 201
Zr-based Laves phase
effects of lanthanum or cerium on the equilibrium of $ZrNi_{1.2}Mn_{0.6}V_{0.2}Cr_{0.1}$ and its related hydrogenation properties 215
Zr-based Laves phase alloy
properties of $Zr_{0.5}Ti_{0.5}(V_{0.25}Mn_{0.15}Ni_{0.6})_2$ alloy ball-milled with nickel powder 146